[p.276]

249 pulp is chopped. Three days later the chopped material is removed and the surface of the cavity is scratched with a rakelike implement. On the fourth day, collection of the juice begins twice daily. Each time juice is collected, the surface of the cavity is scratched with the rakelike implement. The juice is dipped out with a small pottery vessel and poured into a larger container. If the juice is to be shipped to Uruapan it is put in a 25-liter can. A good plant produces slightly more than 2 liters a day.

252 The bud of the wild agave is cooked in a round hole, 1 meter in diameter and 1 meter deep. The hole is filled with small stones to within 10 or 15 cm. of the top, and a large fire is built on top of the stones. When the fire dies down, the agave buds are thrown on it, covered with leaves of agaves and trees, and then sealed with earth. On the third day the oven is opened. The thick fleshy end of leaves of the smaller wild agave are also roasted. The season is from November to May.

Approximately 20 men in Cherán roast agave in season. They must eat sugar when the agave is cooking so that it will emerge sweet.

[834] They must also abstain from sexual intercourse during the 3 days the agave is in the oven.[10]

245 *Pears.*—The most important fruit in Cherán is the pear. It is carried by traders as far as

[439] Guerrero. Three types are recognized: *leche* (uérgamóte), *pardo* (ɛarápiti), and t'ačani (Spanish name unknown). The only significant difference recognized is that the three types mature at different times, although some say only the uérgamóte transports well.

245 Pear trees are always grafted on a rootstock of wild crab apple, *tejocote*. (This is a sloe-

242 like fruit which bears a marked resemblance in flavor and appearance to the true crab apple.) The *tejocote* trunk is cut with a saw and then split. A pear graft is inserted at each end of the split, sealed in with wax, and wrapped in clean cloth. It is believed the grafts will grow only in January, February, and March, but a school teacher with experimental tendencies claims to have grown them at all seasons.

[194] [10] Agave is of varying importance in other towns. In Angáhuan the techniques are similar. The plant is known here as quiote; the leaves are called iʃikua, the stalk or bud, šámal. Mestizoized Chilchota makes mescal. The leaves are cooked in earth ovens, macerated with clubs in cement tanks, fermented several days, then distilled. The Tarascan terminology relating to the agave and its processing survives in part.

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245 Pears and other fruit trees are not pruned, cultivated, or fertilized. Fruit to be shipped, especially pears, is picked with a special implement to prevent bruising. Three narrow pieces of shake are cut to a point at one end. They are then tied with string to one end of a long light pole, forming a triangular funnel. The funnel is placed under the fruit and raised, detaching it gently from the tree (fig. 4).

[413]

FIGURE 4.—Pear picker, made of trimmed shakes, cord, and any convenient long pole. The fruit is caught in the opening, lifted until the stem breaks, and then lowered to the ground. Bruised pears will not stand shipment.

Miscellaneous fruits.—A bitter apple, *manzana agria* or *chata*, is grown in Cherán. A larger, sweet apple is grown in Pichátaro, but only four or five trees exist in Cherán.

Three kinds of peaches are grown in Cherán: *blanco*, a type with red flesh near the pit (name uncollected), a green peach (prísku), and a yellow peach (melókuta). Relatively few [439] peaches or apples are exported.

Two kinds of cherries, black and white, are grown in Cherán. Both are dried in some [251] quantities and are sometimes sold in the market at Paracho.

A few *zapote blanco* are grown in Cherán, but most of this fruit consumed in Cherán is imported. The same is true of plums.

The *tejocote* is said not to be cultivated, but it sometimes is planted deliberately along field borders and its fruit is used. As, with the exception of pears, this is all the attention ever given to other fruits, it is fair to include the

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p.28b]

245 *tejocote* as a domesticated type. It is harvested and exported for making jellies and preserves. A few are used locally.
[252]
[439] Some quince trees are found in Cherán. They are little used, but some preserves are made.

BELIEFS AND CUSTOMS

241 Most beliefs and customs center about maize. Most important are the beliefs about red ears, čóču. A red ear is described as the mother, chief, and ače (ceremonial leader) of all maize. In the storage lofts, red ears are mixed in with the yellow and white to act as guardian of the rest. They are never eaten until all the white and the yellow corn are gone. Care is taken to plant seed from one or more red ears in each field; otherwise it is believed that there will be no harvest.

[755] Red ears and black ears are both said to be used in curing, but no details could be secured.

Twin ears, *cuates* (šaninkuáte), are said to come because God wishes to send a little more. Sometimes large ears have four or five points; they are said to be the hand of the planter.

[782] The family harvesting the first green corn in the town places two or three ears on the altar of San Francisco. Each family gives one or two *cargas* of maize on the cob to the priest.

789 If the rains do not come at the proper time near the end of May, the image of San Ramos
[778] is taken to the peak of San Marcos. The image is placed on a white sheet, held by a man at each corner, and tossed in the sheet. If San Ramos can be made to cry, it begins to rain immediately. During the rite a *rezador* recites a rosary, copal is burned, and *cohetes* are fired.

241 Every year, beginning in January, the grass is burned, causing great damage to the forests and destroying the last remnants of pasture. The burning is said to prevent heavy frosts, while the smoke hastens the coming of the
[632] rains. Town officials and officers of the Forest Service succeeded in extinguishing most of the fires in 1940.

It is said there are no beliefs regarding wheat. Nevertheless, wheat must be carried in a wooden bowl while sowing or it will be attacked by rust, *"tecolote."* Rust is a sign the planter used his hat, blanket, or some other improper article at planting. Girls plait elab-

wheat, and the milling charge. A *carga* produces about 14 *arrobas*, or about 250 pounds of flour, of which the mill takes 2½ *arrobas*, or 62½ pounds. The farmer receives 187½ pounds of flour. Either of these procedures involves the labor of transporting wheat to the mill and, in case the farmer has no burros, the rent of pack animals or trucking charges. Mills are at Jacona (regarded as the best), Purépero, Tanátaro, and Carapan.

Yet another way of disposing of wheat is to grind it at home or in a *nixtamal* mill and bake bread for sale in the market towns and at fiestas. Only relatively small quantities are used in this way.

One agricultural activity for which few data were obtained is fruit growing. No information was secured on yields of trees or on labor. The main labor cost is harvesting, usually done by the family at a time when there is little other agricultural activity. Fruit may be carried to markets, or it may be sold to traders.

Another view of farming activity may be gained by examining the income of individual farmers. These data are probably somewhat unreliable, for, as previously indicated, there is a tendency to minimize wealth and income. Table 2 summarizes the available information.

Case 1 is a school teacher with a small family who rents his land. Probably his share in good years supplies most of his family requirements of maize. Case 2 is a storekeeper who also rents his land. In years when his land lies fallow, he must have to buy a little

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121 ally, such studies should be of great aid also, permitting better understanding of the fundamental limitations on Cherán culture.

Once a set of definite objectives has been established, the data of the anthropological study will be of considerable use in formulating a concrete program and in developing Tarascan cooperation. Moreover, the introduction of a program in itself, creates changes in the cultural situation. The dynamic quality of culture makes it important that administrative programs be accompanied by further study and be flexible enough to adapt to the changing situation.

Despite these remarks on the practical problems of government in the Tarascan area, it should be emphasized that the present study is primarily concerned with scientific objectives. These objectives happen to be closely related to practical considerations, for administrative objectives in Mexico call for culture change in some measure. Cultural processes and the function and interrelation of the parts of a culture emerge most clearly from dynamic situations rather than from static studies without temporal extension. Not only practical but scientific objectives can be served by the study of Cherán culture in transition.

APPENDIX 1

FOOD FROM LA CAÑADA

241 atoles. Wheat is sown twice a year; one plant-
262 ing is in June and it is harvested in December; the second is in November, in the house lots, and it is harvested in May. Beans are grown more extensively than at Cherán; the harvest is exclusively by women.

Among the plants generally grown in Chilchota is amaranth (*bledos*). The cultivation is not commercialized, each family growing a little for its own use. Amaranth is used by Indians of La Cañada for making sweets; in Chilchota it is employed in sweets, certain atoles, and in an uncooked tamale resembling a tortilla which is sold in Capacuaro.

● 245 A considerable number of fruits are culti-
262 vated in Chilchota. Mangoes of the *criollo* and

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245 262 *Manila* varieties are grown extensively for export. Scarcely a house lacks a sweet lemon tree. The fruit is sold in bulk to dealers before it is ripe. Bitter limes are sold the same way; the prices are less than for sweet limes, but people in Chilchota say they are more pleasant in flavor. Oranges are also grown extensively in orchards. Two varieties of guavas are utilized. The type known as *corriente* grows wild and is used only by poor people who cook the fruit in honey. The "fine" type is cultivated and sold. A few bananas are grown of the type known in Mexico City as *platano bolso* and in Uruapan as *corriente*. The local name is *Costarica*. A "fine" and an "ordinary" variety of peaches are grown; the entire crop is exported. Cherimoyas occur in most orchards, but not in such quantity as in the Tarascan towns of La Cañada. The product is all consumed locally. Some *zapote blanco* is cultivated in Chilchota; more is grown among the Tarascan towns. Cherries grow half-wild, being planted but not tended. The fruit is eaten raw or made into confections. A fruit known as juakinicuiles (in Mexico City, jinicuiles) is planted but not cultivated; it is much prized. Citron is grown in some orchards; all the product is sold. The tejocote is not used at all in Chilchota, and some people even were amazed at the idea it should be eaten.

Coffee is extensively cultivated, sharing with lemons the major place in the orchards. Almost all the coffee is sold in the bean in Zamora, and the coffee consumed locally is brought from Zamora.

244 262 Three varieties of squash are cultivated. Calabaza Tarasca is grown in the fields and is all consumed in the town, either boiled or roasted in hot ashes. Calabaza de Castilla is grown in two varieties, one with hard shell and one with soft. Both are exported. A variety called sopoma grows in the fields and is all used in the town, either to make sweets or as greens for broth or stew.

222 262 The principal wild plant used for food in Chilchota is a species of prickly pear (*tuna*), known as jococoxtle. It is used in certain of the beef stews or is ground with chile to make a sauce placed on the table.

253 443 262 Meat is mostly butchered on Saturday and Sunday, and the main sales take place on

244 European cabbage (*col, repollo*), which the Indians
262 have thoroughly taken into their diet. Both the leaf and head varieties are cultivated. Almost every ekuáru in all Tarascan villages contains a small patch of cabbages, which are used for the famous čurípu, or meat and vegetable stew [94] (pl. 5). A more common stew (*repollo*-šakuá) is made of cabbage alone, flavored with red chile, onion, and silantro. The leaf cabbage is the
244 usual variety found in the Sierra. It is rarely planted by seed, but by replanting sprouts that occur at the base of the stalk. The plant is persistent, surviving the frosty Sierra winter; leaves are stripped off until the stock often reaches a meter in height. Other vegetables such as lettuce, radishes, carrots, peas, and turnips, although known in many parts of Tarasca since early colónial times, are today little cultivated or used in native cookery.

247 In addition to the food annuals, the ekuáru
249 contains various medicinal and ornamental plants, mainly those of the Solanaceae, Fabaceae, and Compositae. In a great number of the house
[276] lots women plant a stalk or two of tobacco (*Nicotiana rustica*, andúmukua), used not for smoking,
[278] but as medicine.[95] The *trompeta* or *floripondio* (*Datura arborea*); *colorín* or ploiénia (*Erythrina americana*); two euphorbias, *chupiri* (*E. calyculata*) and *flor de pascua* (*E. pulcherrima*); and the Old World *higuerilla* or castor bean (*Ricinus communis*) are not uncommon in the house gardens of the low country marginal to the Sierra. European Compositae, geraniums etc., make up most of the ornamental plants cultivated around the house.

Fruit culture in the ekuáru.—Practically every
245 house lot in most Tarascan villages contains a few fruit trees, both Old World and native. A definite climatic distribution of fruit types exists. In the Sierra are found only the cold-tolerant deciduous fruits such as the European peach, apple, pear, quince, and the native crab apple (*tejocote* or kaiás) and cherry (*capulín* or šéngua). In the lowlands around the Sierra, however, both subtropical and cold-tolerant fruits are cultivated. The former include the Old World citrus (limes, oranges, lemons), figs, pomegranate (*granada de*

[94] Čurípu is eaten principally during the maize harvest period and on religious holidays.

[95] For example, in Pichátaro tobacco is taken for fever and is chewed to cure toothache.

245 *Castilla*), and the *granada de China*, and a great variety of native subtropical fruits such as the aguacate, chirimoya, guayaba, and zapote blanco. In the warmer sections of the *tierra templada* are found tropical fruits, the native mamey and zapote prieto, the Asiatic mango, Old World varieties of the banana, and the possibly native plantain.

245 177 197 The European fruits were brought into the Tarascan area early in the 16th century mainly by missionaries. Every mission, church, or convent had its small garden where the priest and Indian neophytes cared for fruit trees and vegetables. Consequently the new fruits spread rapidly among the Tarascan villages, and were soon fully accepted into the native economy. Both the Relaciones geográficas (Mus. Nac., leg. 102) and the Ponce Relación indicate the widespread cultivation of European fruits in the Tarascan area during the latter part of the 16th century. With fruit [242] cultivation the missionaries probably introduced the technique of grafting, e. g., the insertion of apple and pear cuttings into native *tejocote* to insure a hardy root system adapted to local soils and climate. Grafting is still practiced in most Tarascan villages.

245 Arboriculture among modern Tarascans consists of little more than a few fruit trees planted in the ekuáɾu or along hedgerows. Most trees are only semicultivated. Except for initial grafting [242] of apples and pears and the planting of shoots of other fruits, little care is taken of trees. Systematic pruning is not practiced, nor is any attempt made to control disease or insect pests.

245 438 Although in most pueblos fruit is grown chiefly for local consumption, the people of some towns specialize in raising certain fruits for export. The Sierra communities of Cumachuén and Pichátaro are the apple producers;[96] Cherán, Parangaricutiro (prior to the volcano), Tancítaro, and the *rancho* of Tenguecho specialize in pears.[97] In these towns the entire ekuáɾu of some households may be devoted to fruit trees, forming a small

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[439] [96] Many varieties of apples are marketed in these towns. The most popular is termed *cuaruse*, a reddish fruit picked in August and September. Others, *chata*, *marieuse*, *chata de Serise* (a small crab apple), are harvested in October. In addition, the small red *manzlana* is grown in Pichátaro. Apples from Cumachuén and Pichátaro are carried by *arrieros* into the *tierra caliente* as far as Petatlán on the Pacific coast of Guerrero. They are also taken to the large markets of the plateau: Zamora, Pátzcuaro, Zacapu.

[97] In 1789 pears formed one of the main industries of Capacuaro, but are now relatively unimportant (AGN Historia, vol. 73, f. 328). See Beals, 1946, pp. 27-28, for description of pear picking.

245 438 orchard. In such cases trees are closely spaced and present an unkept appearance.

Many Tarascan pueblos in the lower and warmer areas bordering the Sierra specialize in subtropical fruits, and possibly served prehistorically as fruit supply centers for the Sierra towns. Since the development of modern transportation their produce is taken to many parts of Mexico. San Angel Zurumucapio is the avocado center of the Tarascan *tierra templada*,[98] Tingambato the chirimoya town, and the former Tarascan pueblos, Ziricuritiro and Acahuato, produce bananas, mangoes, mamey, citrus, etc. Tarascan Atapan and mestizo Tingüindín supply the western part of the Sierra with citrus, guayaba, and mangoes. As early as 1581 Atapan had become a citrus-growing center, and probably before the Conquest had produced avocados and chirimoyas for Sierra trade. The La Cañada towns have ever been the northern Tarascan fruit center. Today avocados form the main fruit speciality of Acachuén, Ichán-Tacuro, and Carapan; oranges are the chief export of Tanaquillo.[99] With the possible exception of Ihuatzio, which produces large quantities of avocado, there is no specialized fruit town in the Lake area, although the aggregate subtropical fruit production there is of importance in Sierra trade.

262 Fruits from the *tierra caliente* have long had a special significance among the Sierra Tarascans. Today at least two tropical fruits are eaten especially at religious fiestas, and special effort is made to obtain them for such occasions. Coconuts (kóko) in some Sierra pueblos are rarely eaten except during the Ramos and Easter holidays. [439] Formerly in Charapan 2 weeks before Easter a group composed of 15 men and boys from each barrio traveled down to the Tepalcatepec Basin to fetch coconuts for eating and coconut blossoms for church decorations. [389] The band was ceremoniously seen off with the firing of rockets.[100] Likewise, the large plantain (*plátano macho*) is eaten

[98] The large avocado trees in the house lots of Zurumucapio completely hide the town. Two types of the fruit are grown, the black and white-skin varieties. Both are irrigated, and the fruit is harvested in April and May. Frequently coffee plants are grown under the shade of the avocado.

[99] Other fruits produced in La Cañada: Limes, guayaba, chirimoyas, figs, apricots, juaquiniquiles (ísarén), plums, mangoes, pomegranates, peaches, apples, zapote blanco, capulín, a few bananas.

[100] This custom has practically disappeared in the Sierra. Most coconuts and other tropical fruit are now obtained at the Ramos (Palm Sunday) fairs at Peribán, Zamora, Uruapan, and Pátzcuaro. In the Lake area during Easter festivities churches are often decorated with melons (*sandías*) from the Balsas.